

Schizophrenia: Effect of Perceived Stigma on Two Dimensions of Recovery

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Abstract

Rationale: Among those with schizophrenia, hope in a fulfilling future and belief in one's own competence have been identified as two subjective dimensions of recovery. **Aim:** Our aim in this study was to determine how closely these two constructs were related and to what degree they were linked to stigma, social support, illness severity, and duration of illness. **Method:** We administered the Miller Hope Scale, Sherer's Self-Efficacy Scale, the Norbeck Social Support Questionnaire, the Link Perceived Stigma Questionnaire, the Positive and Negative Syndrome Scale (PANSS), and the Beck Depression Scale to 70 individuals diagnosed with schizophrenia/schizoaffective disorder. **Results:** As expected, hope and self-efficacy were highly intercorrelated ($r=.58$). Of the other constructs we measured, only perceived stigma was significantly associated with both of the two recovery dimensions. **Conclusions:** In this population, feeling hopeful about the future and feeling effective went together. The perception that schizophrenia is stigmatized accounted for variation in both hope and self-efficacy, adding to the growing body of evidence attesting to the negative consequences of perceived stigma.

Key Words: Schizophrenia, Stigma, Hope, Self-Efficacy, Recovery

Introduction

Based on results of long-term outcome studies and an increased attention to consumer perspectives, the focus of treatment for schizophrenia has shifted to include a recovery orientation (1). Identifying factors that support or hinder recovery is essential for an evidence-based approach to the successful management of schizophrenia. While there is ongoing debate in the academic literature regarding definitions of recovery (2, 3), consumers report that finding hope and meaning in life, re-establishing identity, and taking responsibility for feeling well (4, 5) are important ingredients. Hope for a better future and belief in one's ability to achieve personal goals are two important

dimensions that recur in the literature on recovery (6-10) and are included in recovery rating scales (11-14). This study examines the strength of association between these two constructs (hope and self-efficacy) and the extent to which they are influenced, as has been suggested (8, 15-17), by perceived stigma, social support, illness severity, depression, and duration of illness.

Perceived stigma has been previously identified as an obstacle to recovery, associated as it is with decreased self-esteem, hopelessness, secrecy and withdrawal, as well as with shame and self-doubt (16, 18). The support of family and friends (social support) has, on the other hand, been positively correlated with recovery (17, 19), hope (20, 21), and self-efficacy (17, 22). There is a questionable correlation in the literature between symptom severity and recovery. Anthony's definition of recovery (23) does not exclude the continuing existence of symptoms. At the same time when symptoms are severe, they impact on hope and self-efficacy which, based on the literature, we hypothesize to be important aspects of recovery. Specific symptoms, particularly subjective distress and depression, have been found to negatively influence self-esteem, another theoretical indicator of recovery (15, 24). Minimal symptoms, therefore, may or may not be part of recovery (25, 26). The process of coming to terms with suffering from a chronic illness and moving through stages of coping and adaptation necessarily involves a dimension of

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time, the exact duration of which will vary with the individual (5). Long-term outcome studies with 22-37 year follow-up periods have consistently reported relatively good functioning (27) while short or medium-term outcomes are mixed (28).

Our hypothesis was that hope and self-efficacy in our population would be highly correlated, both having been previously reported as components of recovery. We further hypothesized that both would correlate positively with social support, and negatively with perceived stigma and illness severity. We did not know whether the duration of illness considered in our study would correlate positively or negatively with these two dimensions of recovery.

Methods

Seventy individuals with schizophrenia were recruited from six rehabilitation and treatment centers in southern Ontario. Inclusion criteria were:

1. a clinical diagnosis of schizophrenia or schizoaffective disorder within the past two to fifteen years confirmed by a standardized *DSM-IV* criteria checklist applied to the clinical record,
2. ability to read and understand English at least at a Grade 5 level,
3. no identified current (in the last month) substance abuse.

In order to minimize the confounding effects of current substance use on the subjective perceptions we were studying, individuals who self-reported using substances within the last month were excluded from the study. Approvals were obtained from each of the various hospital/university Ethics Review Boards. All subjects were screened by a clinician and declared competent to consent. They subsequently completed a demographic questionnaire, and the first author (JLL), who had received prior standardized training in the use of this instrument, administered the PANSS. All questionnaires were administered either by JLL or by a trained research assistant.

Instruments

Hope: The Miller Hope Scale (MHS) is a 40-item Likert scale that measures multidimensional attributes of hope and has established reliability and validity in healthy and ill populations (29).

Self-efficacy: The Self-Efficacy Scale (SES) developed by Sherer and colleagues (30) consists of 30 items rated on a five point Likert-type scale.

Social Support: The Norbeck Social Support Questionnaire (NSSQ) is a two-stage questionnaire, the first measuring the size and membership of the social network, and the second rating the degree of support received from each identified member. A five point Likert-type scale assesses two

conceptual properties of support: emotional and practical assistance (31, 32).

Duration of Illness: The range of illness duration in the sample was between two and fifteen years.

Perceived Stigma: Stigma was measured using the Link Perceived Stigma Questionnaire (LPSQ) (33). It consists of 29 items rated on a six point Likert-type scale with four sub-scales: devaluation-discrimination, secrecy, withdrawal, and education.

Illness severity:

- a) The Positive and Negative Syndrome Scale (PANSS) was used with White and colleagues' (34) five sub-scales: negative, positive, activation, dysphoric, and autistic preoccupation.
- b) Depression was measured with the Beck Depression Inventory (BDI), one of the most widely used depression scales since its introduction in 1961 (35).

Demographics: Age, gender, marital status, and number and length of hospitalizations were also collected.

Sample Size: Based on a power analysis aimed to achieve statistical significance at the .05 level, a sample size of 70 subjects was calculated a priori. The rationale was a five to ten subject ratio for each of the primary variables measured (36). In order to understand the findings in greater detail, a post-hoc analysis was conducted on the sub-scales, but only after finding statistical significance in a primary variable.

Results

Response rates: The response rates varied from 43% to 59% of eligible individuals referred from the six sites. All subjects were treated as one group as no differences were found among the six sites on demographics or on primary variables using ANOVA.

Demographics: Seventy individuals with schizophrenia met the inclusion criteria and completed all of the questionnaires. Forty percent were female (n=28) and 84% were single (n=59), 7% were married or living common-law (n=5), and 9% were divorced or separated (n=6). Age, duration of illness, and days in hospital are summarized in Table 1. All participants were currently receiving treatment, which included medication, case management, and skills training. Four percent (n=3) were in hospital at the time of the interview. While it is impossible to evaluate the quality of treatment received, it generally matched Canadian treatment guidelines for individuals with schizophrenia (37).

Findings: Hope and self-efficacy were found to be highly correlated ($r = .58, p < .001$). Correlates of hope and self-efficacy were determined by multiple regression analyses with all of the hypothesized predictor variables entered in one step. Depression, size of the social network, stigma, and total PANSS scores entered into the equation, accounting for 41% of the variance in hope (Table 2). The

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size of the social network correlated positively while depression, perceived stigma, and total PANSS scores correlated negatively with hopefulness. A similar approach was used for self-efficacy (Table 3), and here, perceived stigma was the only predictor variable that was statistically significant.

Table 1		Demographics		
	Range	Mean	SD	
Age	20–50	31.10	6.27	
Duration of Illness (Years)	2–19	7.41	4.65	
Days in Hospitals	0–3890	225.2 (Median=73.0)	542.84	

Table 2		Multiple Regression Analysis for Hope			
Predictor Variable	Pearson <i>r</i>	Beta	SE	<i>p</i>	
Beck Depression	–0.44 [†]	0.85	0.25	<.001	
Size of Social Network	0.38 [†]	1.17	0.37	0.003	
Stigma	–0.44 [†]	0.34	0.12	0.006	
PANSS Total	–0.23	0.37	0.16	0.019	
Duration	0.08	0.24	0.46	0.596	
Adjusted R ² = .41			<i>p</i> < .001		
† <i>p</i> < .001					

Table 3		Multiple Regression Analysis for Self-Efficacy			
Predictor Variable	Pearson <i>r</i>	Beta	SE	<i>p</i>	
Stigma	–.39 [†]	0.21	0.08	.008	
PANSS Total	–.14	0.16	0.10	.118	
Size of Social Network	.25 [†]	0.33	0.24	.177	
Beck Depression	–.23 [*]	0.18	0.16	.287	
Duration	.05	0.02	0.30	.841	
Adjusted R ² = .16			<i>p</i> = .005		
* <i>p</i> = .05 † <i>p</i> = .04 ‡ <i>p</i> < .001					

Discussion and Conclusion

As predicted, hope and self-efficacy were highly intercorrelated in this sample. We had anticipated that this would be so, based on previous qualitative research on these constructs (38). The closeness of the two constructs is consistent with Salerno's finding of a moderate correlation between hope and "power." Salerno has defined "power" as the "capacity to participate knowingly in the nature of change" (39, p.25). This definition has a high degree of conceptual overlap with self-efficacy, which has been defined as the belief that one is capable of organizing and performing actions that will produce desired results (22).

Depression, size of the social network, stigma, and total PANSS scores were significant in accounting for variance in hope. The findings on the size of the social network confirmed the results of previous research on hope and schizophrenia (21, 38, 40). Based on Bandura (22), it had been anticipated that social support would also influence self-efficacy, but it did not, Bandura's association having been made on theoretical rather than on empirical grounds. Symptom severity and depression were also linked to the variance in hope, but not in self-efficacy, underscoring the fact that the two concepts, though closely correlated, are not identical.

Only perceived stigma correlated with both hope and self-efficacy. The significant impact of perceived stigma in this study is consistent with other research on recovery where perceptions of devaluation-discrimination strongly predict self-esteem at six-month and twenty-four month follow-up (16). Perceived stigma assesses the respondent's beliefs about other people's attitudes and may or may not be based on personal experience of discrimination/devaluation. Nevertheless, it is a belief that, even if false, affects one's self esteem and level of hopefulness. Focus groups with patients, family members, and mental health professionals reveal that stigma is experienced in interpersonal interactions, and as responses to media images of mental illness, obstacles to the attainment of social roles, and structural discrimination (policies and regulations) (41,42).

There exists today a high degree of stigma against people with mental illness, more in some cultures than in others, and more against some diagnoses (schizophrenia) than others (depression), especially when the public equates the diagnosis with dangerousness and unpredictable behavior (43,44). It leads to social distance, in that people are less likely to engage in intimate relationships (marriage) with individuals who belong to the stigmatized group (45). Knowledge about mental illness, biological attribution (i.e. the person is not to blame), familiarity with individuals suffering from mental illness, or even being a mental health professional may reduce but does not necessarily eliminate stigma, which varies over time and may rise when social conditions worsen or when violent crimes are committed by

those diagnosed with a mental illness and are widely publicized (46-56). Stigma is a powerful obstacle to recovery.

The results of this study may not hold for all individuals with schizophrenia since our sample was linked to treatment and rehabilitation services. Every person in the sample reported being on medication and was able to answer all PANSS questions about medication (although subjects were not asked whether they were taking their medication exactly as prescribed). The exclusion of current (one month) substance abuse may also make this a somewhat atypical North American schizophrenia sample (57).

In conclusion, this study contributes to our understanding of the relationship between important dimensions of recovery: hope and self-efficacy. It adds to the growing body of literature on the negative impact of perceived stigma and provides a meaningful framework for designing effective clinical interventions. Our findings suggest that interventions aimed at inspiring hope may, if successful, also allow individuals with schizophrenia to believe that they can make positive changes in their lives. The reverse should also be true, that promoting a greater sense of self-efficacy will increase hopefulness. This putatively provides clinicians with alternative approaches for enhancing two beliefs that are central to recovery. As Mueser, Corrigan, Hilton and others have suggested, effective strategies for illness control within a framework of recovery are feasible and should prove successful (58).

References

- Bellack AS. Scientific and consumer models of recovery in schizophrenia: concordance, contrasts, and implications. *Schizophr Bull* 2006;32:432-42.
- Liberman RP, Kopelowicz A. Recovery from schizophrenia: a concept in search of research. *Psychiatr Serv* 2005;56:735-42.
- Resnick SG, Rosenheck RA, Lehman AF. An exploratory analysis of correlates of recovery. *Psychiatr Serv* 2004;55:540-7.
- Mead S, Copeland ME. What recovery means to us: consumers' perspectives. *Community Ment Health J* 2000;36:315-28.
- Andresen R, Oades L, Caputi P. The experience of recovery from schizophrenia: towards an empirically validated stage model. *Aust N Z J Psychiatry* 2003;37:586-94.
- Kruger A. Schizophrenia: recovery and hope. *Psychiatr Rehabil J* 2000;24:29-37.
- Jacobson N, Greenley D. What is recovery? A conceptual model. *Psychiatr Serv* 2001;52:482-85.
- Lysaker PH, Campbell K, Johannesen JK. Hope, awareness of illness, and coping in schizophrenia spectrum disorders. *J Nerv Ment Dis* 2005;193:287-92.
- Shahar G, Trower P, Iqbal Z, Birchwood M, Davidson L, Chadwick P. The person in recovery from acute and severe psychosis: the role of dependency, self-criticism, and efficacy. *Am J Orthopsychiatry* 2004;74:480-88.
- Noordsy D, Torrey W, Mueser K, Mead S, O'Keefe C, Fox L. Recovery from severe mental illness: an intrapersonal and functional outcome definition. *Int Rev Psychiatry* 2002;14:318-26.
- Corrigan PW, Salzer M, Ralph RO, Sangster Y, Keck L. Examining the factor structure of the recovery assessment scale. *Schizophr Bull* 2004;30:1035-41.
- Ralph RO, Kidder K, Phillips D. Can we measure recovery? A compendium of recovery and recovery-related instruments. Cambridge (MA): Human Services Research Institute; 2000.
- Chen EY, Tam DK, Wong JW, Law CW, Chiu CP. Self-administered instrument to measure the patient's experience of recovery after first-episode psychosis: development and validation of the Psychosis Recovery Inventory. *Aust N Z J Psychiatry* 2005;39:493-9.
- Andresen R, Caputi P, Oades L. Stages of recovery instrument: development of a measure of recovery from serious mental illness. *Aust N Z J Psychiatry* 2006;40:972-80.
- Markowitz F. Modeling processes in recovery from mental illness: relationships between symptoms, life satisfaction, and self-concept. *J Health Soc Behav* 2001;42:64-79.
- Link BG, Struening EL, Neese-Todd S, Asmussen S, Phelan JC. Stigma as a barrier to recovery: the consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatr Serv* 2001;52:1621-6.
- Liberman RP, Kopelowicz A, Ventura J, Zarate R, Mintz J. Operational criteria and factors related to recovery from schizophrenia. *Int Rev Psychiatry* 2002;14:256-72.
- Corrigan P, Lundin R. Don't call me nuts! Coping with the stigma of mental illness. Tinley Park (IL):Recovery Press; 2001.
- Smith MK. Recovery from a severe psychiatric disability: findings of a qualitative study. *Psychiatr Rehabil J* 2000;24:149-58.
- Landeen J, Seeman MV. Exploring hope in individuals with schizophrenia. *Int J Psychosoc Rehabil* 2000;4:505-15.
- Byrne CM, Woodside H, Landeen J, Kirkpatrick H, Bernardo A, Pawlick J. The importance of relationships in fostering hope. *J Psychosoc Nurs Ment Health Serv* 1994;32:31-4.
- Bandura A. Self-efficacy: the exercise of control. New York: W. H. Freeman and Company; 1997.
- Anthony WA. Recovery from mental illness: the guiding vision of the mental health service system in the 1990s. *Psychosoc Rehabil J* 1993;16(4):11-23.
- Shahar G, Davidson L. Depressive symptoms erode self-esteem in severe mental illness: a three-way, cross-lagged study. *J Consult Clin Psychol* 2003;71:890-900.
- Hoffmann H, Kupper Z, Kunz B. Hopelessness and its impact on rehabilitation outcome in schizophrenia - an exploratory study. *Schizophr Res* 2000;43:147-58.
- Landeen J, Pawlick J, Woodside H, Kirkpatrick H, Byrne C. Hope, quality of life, and symptom severity in individuals with schizophrenia. *J Psychiatr Rehabil* 2000;23:364-9.
- Harding CM, Zubin J, Strauss JS. Chronicity in schizophrenia: revisited. *Br J Psychiatry* 1992;161(Suppl 18):27-37.
- Hegarty JD, Baldessarini RJ, Tohen M, Waternaux C, Oepen G. One hundred years of schizophrenia: a meta-analysis of the outcome literature. *Am J Psychiatry* 1994;151:1409-16.
- Miller JF, Powers MJ. Development of an instrument to measure hope. *Nurs Res* 1988;37:6-10.
- Sherer M, Maddux JE, Mercandante B, Prentice-Dunn S, Jacobs B. The self-efficacy scale: construction and validation. *Psychol Rep* 1982;51:663-71.
- Norbeck JS, Lindsey AM, Carrieri VL. The development of an instrument to measure social support. *Nurs Res* 1981;30:264-9.
- Norbeck JS, Lindsey AM, Carrieri VL. Further development of the Norbeck Social Support Questionnaire: normative data and validity testing. *Nurs Res* 1983;32:4-9.
- Struening E, Perlick DA, Link BG, Hellman F, Herman D, Sirey JA. Stigma as a barrier to recovery: the extent to which caregivers believe most people devalue consumers and their families. *Psychiatr Serv* 2001;52:1633-8.
- White L, Harvey PD, Opler L, Lindenmayer, JP. Empirical assessment of the factorial structure of clinical symptoms in schizophrenia. *Psychopathology* 1997;30:263-74.

35. Beck AT, Steer RA, Garbin MG. Psychometric properties of the Beck Depression Inventory: twenty-five years of evaluation. *Clin Psychol Rev* 1988;8:77-100.
36. Norman GR, Streiner DL. *Biostatistics: the bare essentials*. St. Louis: Mosby; 1994.
37. Working Group for the Canadian Practice Guidelines and the Canadian Alliance for Research on Schizophrenia. Canadian clinical practice guidelines for the treatment of schizophrenia. *Can J Psychiatry* 1998; 43(Suppl 2):25S-40S.
38. Kirkpatrick H, Landeen J, Woodside H, Byrne C. How people with schizophrenia build their hope. *J Psychosoc Nurs Ment Health Serv* 2001;39:46-53.
39. Salemo EM: Hope, power and perception of self in individuals recovering from schizophrenia: a Rogerian perspective. *Visions* 2002;10:23-36.
40. Kylma J, Juvakka T, Nikkonen M, Korhonen T, Isohanni M. Hope and schizophrenia: an integrative review. *J Psychiatr Ment Health Nurs* 2006;13:651-64.
41. Schulze B, Angermeyer MC. Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. *Soc Sci Med* 2003;56:299-312.
42. Dinos S, Stevens S, Serfaty M, Weich S, King M. Stigma: the feelings and experiences of 46 people with mental illness. Qualitative study. *Br J Psychiatry* 2004;184:176-81.
43. Griffiths K, Nakane Y, Christensen H, Nakane H. Stigma in response to mental disorders: a comparison of Australia and Japan. *BMC Psychiatry* 2006;6:21.
44. Link BG, Phelan JC, Bresnahan M, Stueve A, Pescosolido BA. Public conceptions of mental illness: labels, causes, dangerousness, and social distance. *Am J Public Health* 1999;89:1328-33.
45. Lauber C, Nordt C, Falcato L, Rossler W. Factors influencing social distance toward people with mental illness. *Community Ment Health J* 2004;40:265-74.
46. Stuart H, Arboleda-Florez J. Community attitudes toward people with schizophrenia. *Can J Psychiatry* 2001;46:245-52.
47. Corrigan PW, Edwards AB, Green A, Diwan SL, Penn DL. Prejudice, social distance, and familiarity with mental illness. *Schizophr Bull* 2001;27:219-25.
48. Gaebel W, Baumann A, Witte AM, Zaeske H. Public attitudes towards people with mental illness in six German cities: results of a public survey under special consideration of schizophrenia. *Eur Arch Psychiatry Clin Neurosci* 2002;252:278-87.
49. Thompson AH, Stuart H, Bland RC, Arboleda-Florez J, Warner R, Dickson RA, Sartorius N, Lopez-Ibor JJ, Stefanis CN, Wig NN; World Psychiatric Association. Attitudes about schizophrenia from the pilot site of the WPA worldwide campaign against the stigma of schizophrenia. *Soc Psychiatry Psychiatr Epidemiol* 2002;37:475-82.
50. Hugo CJ, Boshoff DE, Traut A, Zungu-Dirwayi N, Stein DJ. Community attitudes toward and knowledge of mental illness in South Africa. *Soc Psychiatry Psychiatr Epidemiol* 2003;38:715-9.
51. Angermeyer MC, Matschinger H. The stigma of mental illness: effects of labelling on public attitudes towards people with mental disorder. *Acta Psychiatr Scand* 2003;108:304-9.
52. Angermeyer MC, Matschinger H, Corrigan PW. Familiarity with mental illness and social distance from people with schizophrenia and major depression: testing a model using data from a representative population survey. *Schizophr Res* 2004;69:175-82.
53. Angermeyer MC, Matschinger H. The stereotype of schizophrenia and its impact on discrimination against people with schizophrenia: *Schizophr Bull* 2004;30:1049-61.
54. Angermeyer MC, Matschinger H. Causal beliefs and attitudes to people with schizophrenia. Trend analysis based on data from two population surveys in Germany. *Br J Psychiatry* 2005;186:331-34.
55. Nordt C, Rössler W, Lauber C. Attitudes of mental health professionals toward people with schizophrenia and major depression. *Schizophr Bull* 2006;32:709-14.
56. Dietrich S, Matschinger H, Angermeyer MC. The relationship between biogenetic causal explanations and social distance toward people with mental disorders: results from a population survey in Germany. *Int J Soc Psychiatry* 2006;52:166-74.
57. Westermeyer J. Comorbid schizophrenia and substance abuse: a review of epidemiology and course. *Am J Addict* 2006;15:345-55.
58. Mueser KT, Corrigan PW, Hilton DW, Tanzman B, Schaub A, Gingerich S, Essock SM, Tarrrier N, Morey B, Vogel-Scibilia S, Herz MI. Illness management and recovery: a review of the research. *Psychiatr Serv* 2002;53:1272-84.